UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,173	01/30/2002	Clinton S. Hartmann	RFSC-0005	2725

27964 7590 08/18/2005

HITT GAINES P.C.
P.O. BOX 832570
RICHARDSON, TX 75083

EXAMINER	
NGUYEN, HANH N	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/066,173	HARTMANN, CLINTON S.	
	Examiner	Art Unit	
	Hanh Nguyen	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 6/1/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ~~5/23/03~~ 8/16/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The following is a response to the amendments filed on 06/01/2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-13 and 15-20, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ueno et a1. (USPN 3,767,855), referred to as Ueno.

Referring to claims 1 and 11, Ueno discloses system for producing a propagated signal (a signal is modulated for transmission through a communications system (see abstract and col.1, lines 1-64; comprising:

a means for encoding a single element of data within a time period of said propagated signal (data bits represented by pulses are within a time period of a frame and are thus encoded (see figures 1A-1D, col.1, lines 1-64), said time period divided into a group of time slots (a frame spans multiple time periods, T1, which are divided into time slots 0-7 for each time period (see figure 1B)); and

multiple pulses (synchronize pulse Pw and information pulse Ps) distributed in a predetermined manner (pulse Pw located at beginning of each word, information pulse Ps located at second slot) among said group of time slots (slots 0-7) by pulse group keying to encode said single

element of data (several words of a frame overall comprise multiple pulses (more than one pulses (Pw and Ps) per word) and are encoded using pulse position modulation (see col.1, lines 40-60).

Referring to claims 2 and 12, Ueno discloses the system discussed above. Furthermore, Ueno discloses that the single element of data is ascertainable by mapping (inherently, at the receiving end of the transmission, the PPM encoded signal is mapped back to a digital signal so that it can be processed (see abstract and items 1, 12 of figure 2B).

Referring to claims 3 and 13, Ueno discloses the system discussed above. Furthermore, Ueno discloses that the time slots in the group are adjacent (the time slots in Ueno are adjacent (see figure 1B).

Referring to claims 5 and 15, Ueno discloses the system discussed above. Furthermore, Ueno discloses that the time slots have different characteristics (the time slots have different numbers (i.e. 0 through 7) (see figure 1B)).

Referring to claims 7 and 17, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the single element of data is selected from the group consisting of a header, an error detection message, a synchronization element and a data message (the data is message information from a transmitter (see column 1, lines 1-64).

Referring to claims 8 and 18, Ueno discloses the system discussed above. Furthermore, Ueno discloses a plurality of said time periods (the PPM words are divided into a plurality of frames for transmitting the data (see figures 1A-1D at col.1 lines 1-64).

Referring to claims 9 and 19, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the time periods have different numbers of multiple pulses (a differing

number of pulses can exist within a frame since the number of words in a frame can vary (see figures 1A -1D).

Referring to claims 10 and 20, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the number of time slots vary in said time periods (the number of time slots can vary based on the value of N in 2^N (see column 1 lines 30-39).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno in view of Austin (USPN 6,236,855), referred to as Austin.

Referring to claims 4 and 14, Ueno discloses the system discussed above. Ueno does not disclose that the time slots are not adjacent. However, Austin discloses a system wherein stations utilize non-adjacent time slots for communicating (fig.3, col.3, lines 25-35, discloses non-adjacent slots 2 & 5 carrying enhancing signals), thereby preventing or reducing channel interference. Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize timeslots that are not adjacent in the Ueno system because doing so would aid in preventing inter channel interference.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno.

Referring to claims 6 and 16, Ueno discloses the system discussed above. Furthermore, Ueno disclosed that the data that is more than 15 bits long is encoded in the group (more than 15 bits are encoded (see figure 1A). Note, figure 1A only shows 9 bits being encoded but that is because this is only a snapshot of an example of the encoding process. The bits are a stream that would have to be more than 15 bits, since it would not make sense to devise a communication system that only encodes 9 bits.

Ueno does not disclose that the time period is divided into a group of sixteen time slots and a umber of corresponding states corresponds to more than fifteen bits. However, it would have been obvious to one skilled in the art at the time of the

invention to implement Ueno with this feature because doing so would increase the bandwidth of the Ueno system since currently it does not support this many number of time slots in a group.

Response to Arguments

Applicant's arguments filed on 6/1/05 have been fully considered but they are not persuasive.

Applicant argues on page 7 of the Remark that Ueno does not disclose the use of multiple pulses for encoding a single word or single element of data.

Examiner believes that the new claimed feature of "a single element of data" is corresponding to the previously claimed "an element of data". Examiner further does not agree with Applicant 's Opinion because Ueno discloses in Fig. 1c that multiple pulses (synchronize pulse Pw and information pulse Ps) distributed in a predetermined manner (pulse Pw located at beginning of each word, information pulse Ps located at second slot) among said group of time slots (slots 0-7) by pulse group keying to encode said single element of data (several words of a frame overall

comprise multiple pulses (more than one pulses (Pw and Ps) per word) and are encoded using pulse position modulation (see col.1, lines 40-60).

On page 8, Applicant argues that Ueno in combination with Austin fail to teach the invention recited in claim 1 because Austin does not describe multiple pulses within a group of slots or words to encode a single element of data.

As understood by Examiner, Ueno discloses a propagated signal comprising multiple pulses distributed in a group of slots to encode the single element of data. Ueno does not disclose the group of slots arte not adjacent. Austin discloses a system comprising stations utilizing non-adjacent time slots to transmit data (fig.3, col.3, lines 25-35, discloses non-adjacent slots 2 & 5 carrying enhancing signals), thereby preventing or reducing channel interference. Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize timeslots that are not adjacent in the Ueno system because doing so would aid in preventing inter channel interference.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 5712738300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

August 16, 2005

HANH NGUYEN
PRIMARY EXAMINER